

NATIONAL RECONNAISSANCE OFFICE

BROAD AGENCY ANNOUNCEMENT

OSL BAA for FY02

12 December 2001

TABLE OF CONTENTS

INTRODUCTION	1
1. RESEARCH AREAS and OBJECTIVES	
Topic 1 Launch Planning and Acquisition	2
Topic 2 Streamlined Design, Integration and Operations	3
Topic 3 Advanced Launch Vehicle Technologies	5
Topic 4 Risk Management, Standards, and Mission Assurance	5
2. PROPOSAL PREPARATION AND SUBMISSION	9
2.1 Preparation	
2.2 Preliminary Inquiries	
2.3 Level Of Detail	
2.4 Small Business Proposal	
2.5 Eligibility	
2.6 Post Employment Conflict Of Interest	
2.7 Definitions	
2.7.1 Small Business Concern	
2.7.2 Small Disadvantaged Business Concern	10
2.7.3 Permanent Equipment	
2.8 Restrictive Marking On Proposals	
2.8.1 Disclosure Limitations	
2.8.2 Data Rights	
2.8.3 Release Of Information	11
2.9 Report Requirements	
2.10 Subcontracting	
2.11 Proposal Submission	
2.11.1 Timeliness	
2.11.2 Proposal for Continuation	
2.11.3 Copies	
3. CONTENTS OF RESEARCH PROPOSAL	12
3.1 Proposal Guidance	
3.2 Technical Content of Proposal	

4. FINANCIAL	15
5. PROPOSAL EVALUATION	15
5.1 Criteria	
5.1.1 Soundness of Technical/Management Approach/Understanding the Problem	
5.1.2 Related Experience (Contractor Qualifications)	
5.1.3 Past Performance	
5.2 Evaluation Procedure	
5.3 Stand-Alone Evaluation	
6. AWARD	17
7. ATTACHMENTS	
1. Evaluation of Broad Agency Announcement	
2. Policy Statement for Proposals from Offerors Seeking Research Contracts	

INTRODUCTION

This is a Broad Agency Announcement (BAA) from the National Reconnaissance Office (NRO), Office of Space Launch (OSL), Advanced Programs Division (APD). It is issued under the provisions of paragraph 6.102(d)(2) of the Federal Acquisition Regulation (FAR), which provides for the competitive selection of research proposals. Contracts awarded as a result of proposals submitted in response to this BAA are considered to be the result of competition to the maximum extent practicable.

The NRO may contract with educational institutions, nonprofit organizations, and private industry for research in those areas covered in this BAA. The intent of the Advanced Programs Division is to investigate and develop concepts and technologies that will enable the NRO to meet future launch needs. Our goal is to develop technologies that provide the best possible launch capabilities for our users when and where needed in the most cost-effective manner. Specific research interests and objectives covered by this BAA are found in Section 1. Proposed research should investigate truly new and unique approaches and techniques that lead to, or enable revolutionary and evolutionary improvements in capability, performance, and cost.

Offerors may submit proposals on any topic either contained within this BAA or related to a BAA topic. Prior to submitting a proposal, offerors shall contact the Technical Points of Contact (POC), identified with the description of the corresponding research. The type of research effort contemplated should be understood and validated by the OSL technical representative prior to a potential Offeror expending extensive time and effort preparing a detailed technical proposal. In addition, Offerors shall identify on the cover page of their proposal which of the four (4) topic areas (by topic number and title) are addressed in their proposal. Offerors are reminded that this exchange of information in no way implies the Government will fund the concept once formally submitted in a proposal. Offerors are cautioned that only a Contracting Officer may obligate the Government to any agreement involving expenditure of Government funds.

The period of performance for proposals submitted in response to this BAA may be up to a maximum of one (1) year. Proposals shall contain a brief summary of the work and a ceiling rough order of magnitude (CROM) price. It is the Government's intent to restrict the value of any contract awarded as a result of this BAA to a maximum price of \$350K per contract. The Government anticipates award of contracts not later than 1 May 2002. Offerors shall submit proposals not later than 12 February 2002 with a stated effectivity through 1 May 2002. Offerors are cautioned that award of any contract(s) pursuant to this BAA is subject to the availability of funds.

All written communications, including submission of proposals pursuant to this BAA, shall be forwarded to the OSL Contracting Office Point of Contact, Mr. Merrill Huler, Contracting Officer, who can be reached at (310) 416-7497. Please call Mr. Huler only if

you have questions of a contractual nature. Technical questions/comments should be directed to the technical points of contact listed in Section 1 herein.

SECTION 1 - RESEARCH INTERESTS: Specific technology areas of interest for this BAA are listed below:

Topic 1: Launch Planning and Acquisition: Launch planning begins at a very early stage in the life of a space system. The premature assumption of launch vehicle capabilities and needs can have a significant negative impact on the total cost of launch, particularly if many mission unique modifications are required of the launch vehicle and/or if launch vehicle specific modifications are required of the spacecraft. The development of requirements, and the comparison of these requirements with the capabilities of existing launch systems characterize the planning and launch vehicle selection process. These planning activities start in early system concept development, proceed through acquisition strategy development, and culminate in the procurement of the launch service. Proposals need not be launch-centric, but Offerors should attempt to identify the potential benefits of their concepts to the launch planning/acquisition community. If proposing in this area, the Offeror should describe how their proposal addresses one or more of the following issues.

- Issue: How do we improve the launch community's ability to conduct long-range planning and/or launch vehicle/service acquisition? With an objective of identifying the mechanisms that provide the ability to conduct launch vehicle trades and obtain launch services at the greatest cost savings, provide a summary of approaches, concepts, and tools to achieve these goals. Each approach should have an estimated potential payoff in terms of schedule, cost, and risk mitigation. Also note the timeline in which these recommendations must be infused into the process to maximize value to the program.
- Issue: How do we streamline the acquisition process by utilizing new procurement, contracting, partnering, or investment approaches? With the goal of enhancing the process of selecting and procuring a tailorable launch service, identify new/innovative approaches.
- Issue: NRO Satellite Vehicle requirements are often being refined during the launch vehicle/service acquisition. Identify contracting approaches that can be used to select an appropriate launch service that is flexible enough to meet Users' needs as their requirements mature. Is there a validation process prior to launch service contract award to define requirements commensurate with the amount of customer involvement needed (e.g. NRO launch needs more customer involvement than a typical commercial launch service)? Note any precedent in government or commercial acquisitions that support your recommendation.
- Issue: Booster expertise is required to support a satellite development early and throughout the spacecraft design process. Are there innovative approaches to accomplish this goal?
- Issue: The ability to multi-manifest small experimental payloads is desired. Technical assessments and documenting the advantages/disadvantages of multi-manifest payload adapters are of interest. A historical assessment of co-

manifesting two or more experiments and/or satellites on domestic boosters and projections for EELV is also of interest.

- Issue: The COMSTAC forecast of commercial satellites demand for launch services was significantly over-projected over the past 7 years. The commercial launch service providers are adjusting to this “unplanned” excess capacity. As it typically takes 2 to 5 years for the launch industry to adjust to market trends, what are the industrial-base requirements to sustain the domestic launch industry (small, medium, and heavy)? What are the risk areas that need to be addressed to preserve the capability and competition in each class of vehicle?

TECHNICAL POC: Mr. Dave Callen (703) 808-6502

Email: dave.callen@osl.nro.mil

Topic 2: Streamlined Design, Integration, and Operation: The primary goal of this BAA topic area is to obtain excellent, innovative ideas for streamlining and enhancing the integration of spacecraft to launch vehicles, or launch vehicles to the launch base. Proposals need not be launch-centric, but Offerors should attempt to identify the potential benefits of their concepts to the launch integration community. More generic approaches intended to enhance the management of complex system interfaces are also sought. Integration activities typically involve frequent interaction and data transfer between numerous disparate organizations; continuous tracking of action items and status; and continual development, documentation, and verification of requirements. All users need quick and cost effective processing on any given launch base. Examples of such operations for launch vehicles and spacecraft alike include transportation, processing, testing, training, launch, and on-orbit activities. Operations activities are typically characterized by the need for real-time collaboration among many mission partners, efficient allocation of resources, scheduling at many levels of detail, and reliable transmission of real-time telemetry data between disparate sources and users both for testing purposes and for the conducting of launches. Offerors are not expected to address the entirety of launch base operations, but should attempt to identify the potential benefits to the operations community. If proposing in this area, the Offeror should describe how their proposal addresses one or more of the following Issues.

- Issue: Satellites and launch systems are extremely complex and interact as a single system during the launch phase. Are there innovative approaches, concepts, tools, etc. that can improve the process of integrating complex systems? How do we determine their potential payoff, particularly during the period of Design and Integration?
- Issue: Commercial satellites achieve a measure of flexibility by integrating their satellites on several launch systems. Identify the design strategies that allow this flexibility and recommend how this can be done by the NRO. We are looking for innovative, cost effective solutions to integrating a single spacecraft with multiple launch vehicles. How do we determine potential payoff?

- Issue: Small experiments and/or satellites are used to test and validate concept and components. How do we increase the manifesting opportunity of small payloads or spacecraft? Are there technologies that can enhance their manifesting opportunities?
- Issue: The analysis process is critical to assure that both the satellite and launch system can operate together without harming each other and that they operate within the bounds of design as validated by the launch systems. Are there innovative or advanced techniques to improve analytical processes? How do we determine their potential payoff, particularly during the period of Design and Integration? Identify improvements to both launch system and satellite system flow of integration data, including program-unique and company-proprietary information, to government and contractor support.
- Issue: The integration of launch vehicles with launch facilities and satellite vehicles with launch vehicles involves several problems in terms of heights, weights, shape, environmental conditions, etc. The NRO is now incorporating some technologies to allow for 3D modeling of potential integrations issues rather than physical pathfinders. How can such models be made accurate enough to correctly portray integration issues? What are the limitations of such technologies? How can proprietary sensitivities concerning satellite and launch vehicle designs be allayed?
- Issue: Satellites and launch systems require extensive operations at the launch base. What new approaches, concepts, tools, etc. hold the potential of improving operations of launch vehicles and/or spacecraft at the launch site and/or spacecraft operations center? How do we determine their potential payoff, particularly during the period of operations?
- Issue: Launch infrastructure needs are complex and range from large buildings for spacecraft encapsulation activities with strict cleanroom requirements, to communications connectivity. How can we make sure that launch site facility/infrastructure needs are identified early and programmed into the acquisition process? Is there an alternate new or innovative flexible launch infrastructure than can be proposed?
- Issue: The 'ship and shoot' philosophy of the EELV era promises to significantly reduce launch base cycle time with reduced launch base testing and new launch vehicle processes. Are there other new approaches or technologies that may reduce launch base cycle time even further? How do we determine the payoff and what trades need to be conducted with the spacecraft designer/manufacturer to bring these ideas to fruition?
- Issue: The concept of Remote Test & Operations promises to reduce manpower costs associated with launch base processing. What technologies are essential to implementing a "test at the launch base from the factory" philosophy? How can heritage programs adapt to this change? What are the expected cost savings, limitations and possible unintended consequences?

- Issue: Day of launch operation involves many personnel in ascertaining the state of health of the SV and LV prior to committing to launch. What technologies and/or methodologies exist to lessen the number of personnel required? Can the NRO Mission Director be confident of mission assurance with less insight than is typical today?

TECHNICAL POC: Mr. Jim Liller (703) 808-2334

Email: jim.liller@osl.nro.mil

Topic 3: Advanced Launch Vehicle Technologies: OSL is interested in examining advanced launch vehicle technologies that hold the potential for higher reliability, lower cost and better performance. Proposed technologies should be those that could be implemented within the next 15 years. Proposals should deal only with launch vehicle subsystems. Proposals examining whole vehicle systems will not be evaluated. Offerors should also include enough technical detail on the proposed technology to enable OSL to assess its technical maturity, feasibility and utility. Each approach should have a payoff in terms of schedule, cost and/or risk mitigation. Offerors should identify synergies with existing government and/or commercial advanced technology programs, such as NASA's 2nd Generation RLV program, the Integrated High Payoff Rocket Propulsion Technology Program or other advanced development programs. Recommendations should include "Technology Compatibility" with existing launch systems and infusion opportunities should be highlighted.

TECHNICAL POC: Mr. Jason Shimshi (703) 808-6399

Email: jason.shimshi@osl.nro.mil

Topic 4: Risk Management, Standards, & Mission Assurance: OSL is interested in the development of technologies associated with risk management, development of industry-wide standards (to include mishap investigations), and new methods and/or technologies to enhance mission assurance. Risk mitigation is a key element in launch activities. Identification of risk and earlier development of mitigation plans has the potential for increasing reliability and decreasing total cost. Industry-wide standards appear to have a great deal of potential for all phases of launch. Based on experience, government directed and/or single supplier standards don't achieve this potential. The goal should be the development and adoption of industry-wide common standards or practices that can streamline the planning, integration, mishap investigation, and operations processes. Currently launch mishaps are handled IAW DoD and Air Force regulations. Mishap investigation boards are typically chaired by senior Air Force members and usually include Air Force, launch vehicle contractor, FFRDC, and safety and operations personnel. Clearly it is in the entire launch vehicle community's interests to quickly, and correctly determine the root cause, or causes, of a launch mishap and to return to operations. Of particular interest are improvements to the mishap process in the EELV era, for both Government and commercial payloads. The NRO's definition of "Mission Assurance" has four major parts; 1) Satellite Vehicle (SV)

Certification, 2) Launch Vehicle (LV) Certification, 3) Mission Design and Analysis (including SV/LV interface) and 4) Independent Risk Assessment. Satellite Certification includes verification that the SV design meets the requirement and that the hardware & software produced meet the design (performed by the NRO SV SPO's independent agent). Launch Vehicle Certification includes verification that the LV design meets the requirement and that the hardware & software produced meet the design (performed by OSL using FFRDC and launch provider actions). Mission Design and Analysis includes verification via separate simulations or analyses of mission aspects and SV/LV interfaces that cannot be tested like they are flown (performed by OSL's FFRDC, LSIC or SETA contractors). Independent Risk Assessment is an independent team reviewing selected areas where a change, deviation or first time use occurs relative to an established technical baseline (performed by the Mission Assurance Team). Obviously, the entire Mission Assurance process begins early in the planning phase and continues through the construction, analysis, testing, and operations phases. If proposing in this area, the Offeror should describe how their proposal addresses one or more of the following issues.

- Issue: Determine how to identify joint launch activity risks (including all joint satellite and launch system documentation, analysis, testing, and operations) in a timely manner without placing a burden on either the satellite or launch system community. Identify integrated or innovative approaches for managing risks, requirements, and processes, or for managing activities in interface verification, independent validation analysis or operations. Find methods and/or technologies to identify and manage risk(s) to ensure that the goals of increasing reliability and decreasing cost are achieved.
- Issue: Risks during planning and acquisition phases are associated with incomplete knowledge of the satellite and any new or unproven launch system capability. Identify innovative risk mitigation technologies that can be identified and validated for this phase.
- Issue: Identify timely mechanisms to consolidate and disseminate information on suspect materials, parts and processes for space flight systems. Propose how to establish a comprehensive, viable, and timely notification system for supplier parts, firmware, and hardware problems. Should we conduct comparison studies of similar complex, high-risk, low-volume industries?
- Issue: Commercial and government launch services are extremely competitive with significant excess capacity. Most launch vehicle/service providers make extensive use of "company propriety" and/or "competition sensitive" markings to isolate information. What are the effects of "company propriety" or "competition sensitive" on risk identification and mitigation?

- Issue: How do we obtain or sustain a forum/mechanism for industry to adopt industry-wide standards and provide feedback from proposed participants on process phase-in?
- Issue: What are the modeling, simulation and other technologies Launch Mishap Boards should have available to them? What level of expertise do such tools require to operate and interpret? How can the industry acquire, and maintain the experienced personnel necessary to effectively manage the Launch Mishap process?
- Issue: What is the ideal makeup in terms of industry, expertise and government personnel of a launch mishap board for investigating a Commercial mishap? Does that differ from a Government Mishap? What procedures should each follow? What role would the NRO, AF & FAA play in each?
- Issue: Should a national level board of investigators similar to the National Transportation Safety Board be responsible for launch mishap investigations? Would the benefits of such a board outweigh the drawbacks? Who would such a board work for during launch mishap investigations?
- Issue: Can we identify methods to provide adequate information to assess a specific launch system for the purpose of mission assurance without unduly interfering with that launch system? How can we enhance mission assurance capabilities? Are there methods of identifying faulty workmanship based on comparison with similar complex, high risk, and low volume industries?
- Issue: Does consolidation of the various mission assurance reviews have any potential for improvement? Are there methods to enhance the “work system” to focus on mission success?

TECHNICAL POC: Mr. Ryan Nogucci (310) 416-7231
 Email: ryan.noguchi@osl.nro.mil

SECTION 2 - PROPOSAL PREPARATION INSTRUCTIONS:

2.1 Preparation. This section is intended to provide information needed to prepare research proposals for submission to the Advanced Programs Division (APD).

2.2 Preliminary Inquiries. Organizations or individuals interested in submitting research proposals to the APD shall first initiate a dialogue with the technical point of contact. The type of research effort contemplated should be understood and validated by the cognizant OSL technical representative prior to a potential offeror expending extensive time and effort preparing a detailed technical proposal. Proposals may be submitted anytime prior to the closing date set forth in paragraph 2.11.1, below. Proposal submissions shall be to the Contracting Officer as stated in paragraph 2.11.3 below.

2.3 Level of Detail. A formal proposal should present the proposed research effort in sufficient detail to allow the APD to evaluate the scientific/technical merit and relevance of the proposed research. Proposals shall not exceed 20 pages without prior Government approval. Note: Each proposal submitted shall identify by topic number and title on the cover page which of the six (6) topic areas is being addressed by the proposal.

2.4 Small Business Proposal. The APD encourages all contractors/organizations, including small business and small disadvantaged business concerns to submit research proposals for consideration. No awards will be set aside for small and small disadvantaged business concerns.

2.5 Eligibility. To be eligible for award of a contract, a prospective offeror must meet certain minimum standards including financial resources, ability to comply with performance schedules, prior record of performance, integrity, organization, experience, operational control, technical skills, facilities and equipment required for performance of the work proposed.

2.6 Post Employment Conflict of Interest. There are certain post employment restrictions on former federal officers and employees, including special government employees (section 207 of Title 18, United States Code (USC)). If a prospective offeror believes a Conflict of Interest may exist, the situation should be discussed with the Contracting Office and legal personnel prior to expending time and effort in preparing a proposal.

2.7 Definitions:

2.7.1 Small Business Concern. A small business concern, including its affiliates, that is independently owned and operated, not dominant in the field of operation in which it is

bidding on Government contracts and qualified as a small business under the criteria and size standards in 13 Code of Federal Regulation (CFR) part 121.

2.7.2 Small Disadvantaged Business Concern. A small business concern is (a) at least 51 percent unconditionally owned by one or more individuals who are both socially and economically disadvantaged, or publicly owned business having at least 51 percent of its stock unconditionally owned by one or more socially and economically disadvantaged individuals and (b) has its management and daily business controlled by one or more such individuals.

2.7.3 Permanent Equipment. Permanent equipment is any article of nonexpendable tangible personal property having a useful life of more than two years, and an acquisition cost of \$500 or more per unit.

2.8 Restrictive Marking On Proposals

2.8.1 Disclosure Limitations. All proposals should clearly indicate any limitations on the disclosure of proprietary information. (See Attachment 2.) Contractors should complete the Research Proposal Cover Page in accordance with FAR 15.609 indicating their preference for release of information contained in proposals. **Offerors are hereby notified that the Government intends to utilize a Peer and Scientific Evaluation Team (PSET), and a Prioritization Integrated Product Team (PIPT) in determining which initiatives should be funded. The PSET will consist of Government, Federally Funded Research and Development Center (FFRDC), and Systems Engineering and Technical Assistance (SETA) Contractors. The PSET will be used in the proposal evaluation process. The PIPT will consist of Government, Federally Funded Research and Development Center (FFRDC), Systems Engineering and Technical Assistance (SETA) Contractors, and Commercial Contractor personnel. The PIPT will be used to prioritize research initiatives for funding. Final recommendation for contracts to be awarded shall be made by the Government Selection Authority (SA). All personnel assigned to both teams will sign a Nondisclosure Form and will be made aware that proposals shall not be duplicated, used, or disclosed in whole or in part for any purpose other than to evaluate the proposal. Any offeror who states in writing that they are unwilling to allow contractor members of the PSET or PIPT to review their proposal shall have their proposal returned without evaluation.**

2.8.2 Data rights. Records or data bearing a restrictive legend may be included in the proposal. Any proprietary data that the offeror intends to be used by the APD for evaluation purposes must be clearly identified. **THE OFFEROR MUST ALSO IDENTIFY IN ITS PROPOSAL ANY TECHNICAL DATA OR OTHER DELIVERABLES THAT WILL BE DELIVERED TO THE GOVERNMENT WITH LESS THAN UNLIMITED RIGHTS. OFFERORS ARE HEREBY NOTIFIED THAT UPON STUDY COMPLETION AND DELIVERY OF FINAL REPORTS THE GOVERNMENT INTENDS TO**

DISSEMINATE THE STUDY RESULTS WIDELY AND PUBLICIZE THOSE RESULTS ON ITS UNCLASSIFIED WEBSITE -- SUBJECT TO FINAL REPORT RESTRICTIVE LEGEND LIMITATIONS. IF REQUIRED, FINAL REPORTS SHALL BE SUBMITTED IN TWO VERSIONS: ONE VERSION SHALL CONTAIN PROPRIETARY DATA THAT WILL NOT BE RELEASED OUTSIDE GOVERNMENT CHANNELS AND THE OTHER VERSION SHALL NOT CONTAIN PROPRIETARY DATA. THE REPORT VERSION NOT CONTAINING PROPRIETARY DATA SHALL CONTAIN SUFFICIENT INFORMATION ABOUT THE STUDY AND ITS RESULTS SUCH THAT ANYONE READING THE FINAL REPORT WILL GET A COMPLETE UNDERSTANDING OF THE STUDY.

2.8.3 Release of Information. The Offeror is cautioned, however, that portions of the proposal may be subject to release under the terms of The Freedom of Information Act, 5 USC 552, As Amended.

2.9 Report Requirements. The APD requires the delivery of a final report and briefing at the conclusion of each contract notwithstanding the fact that the research may be continued under a follow-on contract. The final briefing shall be accomplished at NRO Headquarters, Chantilly, VA. The number and types of other reports may be proposed by the offeror. Interim reports will be prepared and submitted in accordance with requirements mutually agreed to and negotiated and as part of a definitive contract. All final reports shall be submitted in paper and soft copy. The final report shall be submitted in accordance with paragraph 2.8.2 above. In addition, a contract award kickoff meeting shall be conducted at the Contractor's location.

2.10 Subcontracting. Pursuant to Section 8(d) of the Small Business Act (15 USC 637 (d)), it is the policy of the government to enable small business concerns to be considered fairly as prime contractors or subcontractors under Government contracts. Prime contractors and subcontractors are to carry out this policy to the maximum extent possible.

2.11 PROPOSAL SUBMISSION

2.11.1 Timeliness. Proposals may be submitted at any time; however, the Government intends to evaluate proposals at regular intervals. ALL PROPOSALS RECEIVED NOT LATER THAN 1300 HRS. (1:00 P.M.) PACIFIC STANDARD TIME (4:00 P.M. EASTERN STANDARD TIME) ON FRIDAY, 12 FEBRUARY 2002 WILL BE EVALUATED. To avoid delays in evaluation, all proposals must be prepared in accordance with the instructions included in this BAA. All proposals submitted under this BAA shall have an effective period not less than 120 days from the proposal date.

2.11.2 Proposal for Continuation. A proposal for continuation of a given research project will be considered on the same basis as proposals for new research agreements.

2.11.3 Copies. Submittal of five (5) copies of the proposal will expedite the evaluation process. Each copy must contain any applicable restrictive legends (see paragraph 2.8 above). The mailing envelope as well as the cover of the proposal will be marked with "In Response to APD BAA for 2002." Copy one (1), the original, proposal shall be submitted to Office of Space Launch, ATTN: SAF/SL (Mr. Merrill Huler), 2420 Vela Way, Suite 1467-A5, Los Angeles AFB, El Segundo, CA 90245-4659. Copies two (2) through five (5), and the softcopy submission discussed in paragraph 2.1.1.4 shall be submitted to the Contracting Officer's Technical Representative (COTR) Capt. Guy Mathewson email: guy.mathewson@osl.nro.mil, National Reconnaissance Office, 14675 Lee Road, Suite 4BD21M, Chantilly, VA 20151-1715. Electronic (i.e. via email) submissions of proposals to Capt. Mathewson are acceptable to arrive by the date and time specified in paragraph 2.11.1, above; however, one original hardcopy (Copy 1) must be submitted to Mr. Huler at the El Segundo, CA address specified herein above. Electronic submissions shall be compatible with the Microsoft Office 2000 suite.

2.11.4 Softcopy Submission. (Applicable to Offerors choosing NOT to submit proposals electronically.) Offerors shall submit one (1) softcopy of the executive summary and the proposal. The softcopy version shall only be submitted along with the proposal copies 2 through 4 to the Chantilly, VA address set forth in paragraph 2.11.4, above. Use of the softcopy will reduce the amount of time and effort needed by the Government to indoctrinate the PIPT on concepts it will help prioritize. The executive summary shall include a title and an abstract of the Contractor's Statement of Work (CSOW) and basic approach(es) to be used. Softcopy submissions shall be compatible with the Microsoft Office 2000 suite. Use of other application software for submission of proposal data is prohibited.

SECTION 3 - CONTENTS OF RESEARCH PROPOSAL:

3.1 Proposal Guidance. The guidance set forth in the following paragraphs applies to all proposal submissions, except where specifically noted. Any proprietary data that the offeror intends for the APD to use for evaluation purposes must be specifically identified in the proposal. **(See paragraph 2.8 above)**

3.2 Technical Content of Proposal. The technical portion of the proposal shall comply with the following:

3.2.1 Executive Summary. Include an executive summary consisting of title and an abstract of the Contractor's Statement of Work (CSOW) and basic approach(es) to be used on a separate page.

3.2.2 Contractor's Statement of Work (CSOW). The technical proposal shall include a CSOW detailing the technical tasks to be accomplished under the proposed effort and be suitable for incorporation into any contract that may result.

3.2.3 Background and Objectives. Include in the basic proposal a reasonably complete discussion stating the background and objectives of the proposed work, the approaches to be considered, and the level of effort to be employed. Identify the nature and extent of the anticipated results, and, if known, the manner in which the work will contribute to the accomplishment of the APD intent.

3.2.4 Summary of Key Personnel. Provide the names and brief biography of the offeror's key personnel to be involved in the research. Provide documentation of previous work or experience in the field of the proposal and identify published work(s) by the key personnel.

3.2.5 Sponsor-Provided Support. Identify the type of support, if any, the offeror requests of the APD, such as information, equipment, or materials.

3.2.6 Environmental Impact. Make a statement regarding possible impact, if any, of the proposal's effect on the environment. If none, so state.

3.2.7 Required Facilities. Identify the facilities to be used for the work. Provide the detail appropriate for understanding the proposal.

3.2.8 Related Experience/Past Performance. Each offeror will be evaluated on its related experience/past performance. Past performance is defined to include the offeror's performance on completed and current contracts. The Government will focus on information that demonstrates quality of performance relative to the size and complexity of the research item under consideration. Offerors shall submit information (contract number, point of contact, and telephone number for each) on the last three (3) most relevant contracts and/or subcontracts completed during the past three (3) years. "Relevant contracts" are defined as those efforts performed by your company that have demonstrated your ability to successfully perform the technical requirements of your proposed research topic.

3.2.9 Page Limitation. The technical proposal shall be limited to 20 pages (12 pitch or larger type), single spaced, double-sided, 8.5 by 11-inch pages. The page limitation excludes blank pages, title pages, tables of contents, acronym lists, tabs or cover sheets, and lists of illustrations only. Those pages not in the page count may not contain information needed for evaluating the proposal. Each printed side counts as one page. **The Government will not evaluate pages submitted in excess of this limitation.**

3.2.10 Memorandum of Understanding. Complete the enclosed Memorandum of Understanding (Attachment 1) thereby acknowledging the APD policy of evaluation of proposals in response to BAA. This Memorandum of Understanding does not count against the 20-page limit as stated above.

3.2.11 Proposal Classification. All proposals submitted under this BAA shall be unclassified. There are no provisions for submitting classified proposals under this BAA.

SECTION 4 - FINANCIAL:

4.1 CROM Requirements. Provide a Ceiling Rough Order of Magnitude (CROM). This CROM shall state the upper limit for which the effort proposed would cost the Government should the proposal be selected for contract award. Delineate the CROM project costs for each Government Fiscal Year of the program. A detailed cost proposal to support the technical proposal bounded by the CROM shall only be submitted at the written request of the cognizant OSL Contracting Officer (CO). Upon receipt of the detailed cost proposal the Government will perform an evaluation of cost realism and reasonableness.

4.2 Milestones Payment Schedule. The Contracting Officer will authorize payment based upon how well the Contractor completes the predefined milestones for the proposed study. Milestones will have fixed percentage payments of the contract price. The Contracting Officer may defer payment at any milestone when the Contractor has failed to meet the requirements of the milestone. The payment will only be deferred until that time when all requirements have been met. The following milestone payments will be made:

Milestone 1	Kickoff Meeting Completed*	25% of total contract value
Milestone 2	1 st Quarter Status Review	25% of total contract value
Milestone 3	Mid Term Status Review	25% of total contract value
Milestone 4	Final Report/Briefing	25% of total contract value

* Kickoff meetings will either be performed telephonically or at the contractor's facility.

SECTION 5 - PROPOSAL EVALUATION:

5.1 **Evaluation Criteria**. The objective of the evaluation is to identify offerors who will provide the greatest satisfaction of requirements/objectives within funding limitations. Proposals submitted in response to this BAA will be evaluated in accordance with the following criteria, which are listed in descending order of importance:

5.1.1 Soundness of Technical/Management Approach: The objective of this criterion is to establish the technical worthiness of the proposed effort. Items to be considered include technical and management approach toward achieving the stated objective(s), existence of sufficient technical payoff to warrant risk, and long term affects of this research. Proposed research should investigate truly new and unique approaches and techniques that lead to, or enable revolutionary and evolutionary improvements in capability, performance, and/or cost.

5.1.2 Understanding the Problem: The proposal will be evaluated to determine if it addresses a specific research area as identified in this BAA, and determine if the proposed research could completely or partially satisfy the need(s) set forth in Section 1 of this BAA. This criterion does not address the soundness of the technical/management approach. Considerations include problem comprehension, and the degree to which the proposed solution(s), if successful, will satisfy the research needs.

5.1.3 Related Experience (Contractor Qualifications): The objective of this criterion is to establish that the offeror has credible capability and has had sufficient experience to complete the proposed work. Technical milestones and level of planning at each stage of the project must be appropriate to the proposed research. Offeror delivers quality products meeting all contract requirements, performs to schedules, meets interim milestones, and completes projects within budget. The Government will use the information provided as well as any past performance on other OSL contracts in evaluating past performance.

5.2 Evaluation Procedure. Offerors shall discuss submitting a proposal with the cognizant Technical Point of Contact, set forth in Section 2 of this BAA, before submitting a proposal. Offerors are advised that the Government will not pay for the preparation of a proposal, nor does proposal submission mean that the Government will award a contract. Upon receipt of a proposal, using the criteria outlined above, the Peer and Scientific Evaluation Team (PSET) shall perform complete evaluations of proposals and determine the scientific and/or technical merit and potential contribution to the NRO mission.

5.2.1. PSET members will use the criteria contained in Paragraph 5.1 of this BAA to evaluate the proposals. The criteria items will be rated from 0-10, multiplied by the percent weight factor (expressed as a fraction from 0.00 to 1.00), summed, and multiplied by ten to produce a score from 0.0 to 100.0.

5.2.2. PSET members will then meet to discuss their evaluations. The purpose of this meeting is to ensure that each evaluator has adequately considered the possible strengths and weaknesses of the proposal(s) and a consensus evaluation is reached.

5.2.3. The Government PSET members will then prepare final scorings and submit them to the PSET Chairman.

5.2.4. The PSET Chairman will consolidate quantitative evaluation results and draft a Proposal Analysis Report (PAR). The PAR documents the evaluation of the proposal against the evaluation criteria and selects proposals for presentation and consideration by the Prioritization Integrated Product Team (PIPT).

5.2.5. The PIPT will consider the quantitative results as identified and briefed by the PSET Chairperson. The PIPT will then consider the potential for government and commercial application and the benefits expected. The PIPT will be comprised of senior Government officials, and selected FFRDC, SETA, and commercial contractor personnel. Proposed concepts will be prioritized on the following basis, in descending order: innovation, technical merit, benefit to the NRO, and benefit to the overall launch community. The PIPT will rank order the proposals presented and submit its findings to the Government SA. Based on these findings the SA will, based on the availability of funds, make the final decision on which proposals will be pursued for contract award and prepare a Selection Decision Document.

Note: The APD will evaluate proposals based on the merit and relevance of the specific research proposed as it relates to the overall APD research objectives, rather than against other proposals for the research in the same general area.

SECTION 6 - AWARD: Based upon the criteria identified above, the APD may award single or multiple firm fixed price contracts in accordance with technical priority and funding availability. Further, the Government reserves the right to award no contracts resulting from proposals submitted in accordance with this BAA.

Attachment 1

EVALUATION OF BROAD AGENCY ANNOUNCEMENT PROPOSALS

Prior to acceptance of any article of equipment, material, or disclosure of information for evaluation or testing by the Office of Space Launch (OSL), Advanced Programs Division (APD), the following policy must be understood and agreed to by the individual, firm, or corporation submitting such products.

POLICY

1. APD has a continuing interest in receiving and evaluating proposals containing new ideas, suggestions, and inventive concepts for launch systems, supplies, facilities, devices and equipment. However, Government personnel and contractors are constantly engaged in research and development activities. Consequently, the substance of a submitted proposal may already be known to Government employees, contractors, or may even be in the public domain. Therefore, it is desirable, when receiving proposals for evaluation, to insure that the entities submitting proposals are aware of the conditions under which they will be considered by APD.
2. It should be understood that the receipt and evaluation of the proposals by APD does not imply a promise to pay, a recognition of novelty or originality, or any relationship which might require the Government to pay for the use of information to which it is otherwise lawfully entitled.
3. APD will exercise care in accordance with the normal safeguarding of procurement information to ensure that, in addition to technical design or concept data submitted, financial and management plans will not be used by the Government for any purpose other than evaluation of the proposal.
4. The voluntary submission will be handled, as stated, in accordance with established Government procedures for safeguarding such articles or information against unauthorized disclosure. In addition, the data forming a part of or constituting the submission will not be disclosed outside the Government or be duplicated, used, or disclosed in whole or in part by the Government, except for Government use purposes to evaluate the proposal. This restriction extends to, and includes financial and management plan information submitted with, or forming a part of the proposal. This restriction does not limit the Government's right to use information contained in such data if it is obtained from another source, or is in the public domain.
5. Letters notifying offerors of APD 's decision to accept or reject their proposal will be sent via regular U.S. mail to offerors after the evaluation of their proposal has been completed, or upon the decision that funding will not be available. Debriefings will not be given.

6. Offerors will submit the following certification with their proposal, certifying their understanding of the above information:

MEMORANDUM OF UNDERSTANDING

The undersigned who has read and understand the above policy, on behalf of (Name of the Individual, Company or Corporation)

has made a disclosure of a proposal to OSL/APD relating to the research area of

_____,

It is understood that APD has accepted the above proposal for the purpose of evaluating it and advising of any possible APD interest. It is further understood that such acceptance does not imply or create: a promise to pay, an obligation to give up any legal right or to assume any duty; a recognition of novelty, originality, or priority; or any relationship, contractual or otherwise, such as would render the Government liable to pay for or to give up any legal right or assume any obligation for disclosure or use of any information in the proposal to which the Government would otherwise be lawfully entitled.

SIGNATURE: _____ DATE: _____

PRINTED/TYPED NAME: _____

TITLE/POSITION: _____

REFERENCE OSL/APD BAA #

TITLE OF PROPOSAL: _____

Attachment 2

POLICY STATEMENT FOR PROPOSALS FROM OFFERORS SEEKING RESEARCH CONTRACTS

It is the policy of the Office of Space Launch (OSL), Advanced Programs Division (APD) to treat all proposals as privileged information before award and to disclose the contents only for purposes of evaluation. Technical evaluations of these proposals are made by highly qualified personnel. Offerors are hereby notified that the Government intends to utilize a Prioritization Integrated Product Team (PIPT) consisting of Government, Federally Funded Research and Development Center (FFRDC), Systems Engineering and Technical Assistance (SETA) Contractors, and Commercial Contractor personnel in determining which initiatives should be funded.

All evaluators and PIPT members sign Nondisclosure Forms and are made aware that proposals shall not be duplicated, used, or disclosed in whole or part for any purpose other than to evaluate the proposal, without the written permission of the offeror.

Despite internal controls, release of proposal information may be protected from outside sources only to the extent that the proposal is exempt from disclosure under the Freedom of Information Act.

Please complete the following statement indicating your preference for treatment of your disclosure:

STATEMENT OF DISCLOSURE PREFERENCE

(Name of Company or Institution) in submitting proposal (Title/Name or Number of Proposal) with (Name of Principal Investigator/Program Manager or Corporation or Institution Authorized Signature Representative) requires the following procedure to be used during the evaluation of the proposal:

The data contained in this research proposal shall not be duplicated, used, or disclosed in whole or in part for any purpose, other than to evaluate the proposal, without the written permission of the offeror (except that if a contract is awarded on the basis of this proposal, the terms of the contract shall control disclosure and use). This restriction does not limit the Government's right to use information contained in the proposal if it is obtainable from another source without restriction.

Permission is hereby granted to the Office of Space Launch (OSL), Advanced Programs Division (APD) to evaluate this proposal, which may include the evaluation by evaluators both within and outside the Government, with the understanding that a written agreement not to disclose this information shall be obtained from all evaluators.

The proposal shall be marked in accordance with FAR 15.609.

(Date)

(Signature of Authorized Representative)

(Date)

(Signature of Principal Investigator or Program Manager)